

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A coated metal electrode, the metal electrode comprising a coating and an overcoating, wherein the overcoating comprises a surfactant, wherein the coating comprises a sulfur containing moiety in its molecular structure, wherein

~~the coating does not result in a loss of the desired sensing characteristics of the electrode, electrode's ability to measure current, and wherein;~~

the coating is selected from a group consisting of 2-mercptoethanol, 2-mercptoethylamine, thiophene, 4-carboxythiophene, L-cysteine, L-cystine, D-cysteine, D-cystine, L-homocysteine, D-homocysteine, and wherein;

a temporal stability of the coated metal electrode is greater than a temporal stability of a corresponding uncoated metal electrode.

2. (Cancelled) The coated metal electrode according to claim 1, wherein the sulfur containing moiety comprises a thiol.

3. (Cancelled) The coated metal electrode according to claim 1, wherein the sulfur containing moiety comprises a disulfide.

4. (Cancelled) The coated metal electrode according to claim 1, wherein the sulfur containing moiety comprises SO_x.

5. (Cancelled) The coated metal electrode according to claim 1, wherein the sulfur containing moiety is incorporated in a cyclic structure.

6. (Cancelled) The coated metal electrode according to claim 1, wherein the coating further comprises a hydrophilic group.

7. (Cancelled) The coated metal electrode according to claim 6, wherein the hydrophilic group is selected from the group consisting of a hydroxyl group, an amine group, a carboxyl group, a carbonyl group, and an oligo(ethyleneoxide)chain group.

8. (Cancelled) The coated metal electrode according to claim 6, wherein the hydrophilic group comprises a zwitterionic species.

9. (Cancelled) The coated metal electrode according to claim 8, wherein the zwitterionic species comprises an amine group and a carboxyl group.

10. (Cancelled) The coated metal electrode according to claim 6, wherein the coating further comprises a spacer between the sulfur containing moiety and the hydrophilic group.

11. (Cancelled) The coated metal electrode according to claim 10, wherein the spacer comprises an alkyl group or an aromatic group.

12. (Cancelled) The coated metal electrode according to claim 11, wherein the alkyl group comprises at least one of a methylene group and an ethylene group.

13. (Cancelled) The coated metal electrode according to claim 1, wherein the coating further comprises a compound selected from the group consisting of 2-mercaptopropanoic acid, 2-mercaptopropionic acid, thiophene, cysteine, homocysteine, 3-carboxythiophene, and cystine.

14. (Previously Presented) The coated metal electrode according to claim 13, wherein the compound is a stereospecific compound.

15. (Previously Presented) The coated metal electrode according to claim 14, wherein the stereospecific compound comprises a mixture of D isomers and L isomers.

16. (Previously Presented) The coated metal electrode according to claim 14, wherein the stereospecific compound comprises a D isomer.

17. (Previously Presented) The coated metal electrode according to claim 14, wherein the

stereospecific compound comprises an L isomer.

18. (Currently Amended) A method of preparing a metal electrode stabilized by a coating, the method comprising: contacting a metal electrode with a substance comprising a sulfur containing moiety in its molecular structure; and thereafter contacting the metal electrode with a surfactant, whereby a coated metal electrode is obtained, wherein

the coating does not result in a loss of the desired sensing characteristics of the electrode, electrode's ability to measure current, and wherein;

the coating is selected from a group consisting of 2-mercptoethanol, 2-mercptoethylamine, 3-mercaptopropionic acid, thiophene, 4-carboxythiophene, L-cysteine, L-cystine, D-cysteine, D-cystine, L-homocysteine, D-homocysteine, and wherein;

a temporal stability of the coated metal electrode is increased relative to that of a corresponding uncoated metal electrode.

19. (Currently Amended) A method of sensing an analyte, the method comprising: contacting a sample comprising an analyte to a metal electrode, the metal electrode comprising a coating and an overcoating, wherein the overcoating comprises a surfactant, wherein the coating comprises a sulfur containing moiety in its molecular structure, wherein

the coating does not result in a loss of the desired sensing characteristics of the electrode, electrode's ability to measure current, and wherein;

the coating is selected from a group consisting of 2-mercptoethanol, 2-mercptoethylamine, 3-mercaptopropionic acid, thiophene, 4-carboxythiophene, L-cysteine, L-cystine, D-cysteine, D-cystine, L-homocysteine, D-homocysteine, and wherein;

a temporal stability of the coated metal electrode is greater than a temporal stability of a corresponding uncoated metal electrode; and obtaining a measurement indicative of a presence of the analyte in the sample.

20. (New) The method of claim 18, wherein the coating further comprises a stereospecific compound.

21. (New) The method of claim 18, wherein the stereospecific compound comprises a mixture of D isomers and L isomers.
22. (New) The method of claim 18, wherein the stereospecific compound comprises a D isomer.
23. (New) The method of claim 18, wherein the stereospecific compound comprises an L isomer.
24. (New) The method of claim 19, wherein the coating further comprises a stereospecific compound.
25. (New) The method of claim 19, wherein the stereospecific compound comprises a mixture of D isomers and L isomers.
26. (New) The method of claim 19, wherein the stereospecific compound comprises a D isomer.
27. (New) The method of claim 19, wherein the stereospecific compound comprises an L isomer.